



TULSTAR PRODUCTS, INC.

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MATERIAL SAFETY DATA SHEET

Company Information

Company Name: **TULSTAR PRODUCTS, INC.**
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Emergency Contact: CHEMTREC 800-424-9300 (24 hours)

Product Information

Product Name: HFC 152a
Synonyms: Difluoroethane; 1,1-Difluoroethane; Ethylidene Fluoride
CAS Number: 75-37-6
Formula: CH_3CHF_2

Ingredients/Identity Information

Proprietary: No
Ingredient: Ethane, 1,1-Difluoro
Ingredient Sequence Number: 01
Percent: 100
OSHA PEL: Not Established
ACGIH TLV: Not Established
Other Recommended Limit: TWA 1000 PPM (MFR)

Physical/Chemical Characteristics

Appearance: Clear, colorless gas
Odor: Faint ethereal odor
Boiling Point: -13°F (-25°C)
Melting Point: Unknown
Vapor Pressure (MM Hg/ 70°F): 4498 @ 77°F {87 PSIA @ 77°F [25°C] }
Vapor Density (Air=1): 2.4
Specific Gravity: 0.90 (Liquid)
Decomposition Temperature: Unknown
Evaporation Rate & Ref: Not relevant
Solubility In Water: 0.28% @ 77°F & 87 PSIA
Percent Volatiles By Volume: 100
Viscosity: Not relevant
Radioactivity: Not relevant
Corrosion Rate (IPY): Unknown
Auto ignition Temperature: 849°F

Fire and Explosion Hazard Data

Flash Point: $<-58^\circ\text{F}$, $<-50^\circ\text{C}$
Lower Explosive Limit: 3.9
Upper Explosive Limit: 16.9

Extinguishing Media:	Use water fog, carbon dioxide (CO ₂), alcohol foam or dry chemical. Use water spray to cool fire exposed containers.
Special Fire Fighting Proc:	Wear protective clothing and NIOSH-approved self-contained breathing apparatus with full-face piece operated in positive pressure mode. Stop gas flow if possible.
Unusual Fire And Expl Hazrds:	Flammable. Cylinders are equipped with temperature and pressure relief devices but still may rupture.

Reactivity Data

Stability:	Yes
Cond To Avoid (Stability):	Open flame, high temperatures, sparks
Materials To Avoid:	Alkali or alkaline earth metals, powdered aluminum, zinc, beryllium (Be), etc.
Hazardous Decomp Products:	May form hydrogen fluoride and possibly carbonyl fluoride.
Hazardous Poly Occur:	No
Conditions To Avoid (Poly):	Not relevant

Health Hazard Data

LD50-LC50 Mixture:	LD50 (Oral, rat) is not relevant.
Route Of Entry - Inhalation:	Yes
Route Of Entry - Skin:	No
Route Of Entry - Ingestion:	No
Health Haz Acute And Chronic:	Target organs: eye, skin, CNS, respiratory tract, heart. ACUTE- Overexposure by inhalation to very high concentrations may cause heart irregularities, unconsciousness/death. Deliberate inhalation may cause death without warning. Liquid contact can cause eye and skin frostbite. Ingestion is not likely (gas). CHRONIC- Unknown
Carcinogenicity - NTP:	No
Carcinogenicity - IARC:	No
Carcinogenicity - OSHA:	No
Explanation Carcinogenicity:	None
Signs/Symptoms Of Overexp:	Headache, weakness, nausea, dizziness, confusion, in coordination, lung irritation, cough, discomfort, shortness of breath, irregular pulse, frostbite, asphyxiation, heart irregularities, unconsciousness, death.
Med Cond Aggravated By Exp:	Individuals with pre-existing diseases of the central nervous system or cardiovascular system may have increased susceptibility to the toxicity of excessive exposures.
Emergency/First Aid Proc:	Get medical attention if symptoms persist.
EYES:	Immediately flush with warm water for 15 minutes. Call physician.
INHALED:	Remove to fresh air. Provide oxygen/CPR if needed.
SKIN:	Treat for possible frostbite using warm water (105°F), then flush skin with plenty of water.
ORAL:	Unlikely to occur.

*NOTE TO PHYSICIAN: Catecholamine drugs should be used with special caution only in emergency life support.

Disposal Considerations

Waste Disposal

Reclaim by distillation, incinerate, or take to an authorized waste facility. Comply with federal, state, and local regulations.
This material may be an RCRA Hazardous waste upon disposal due to the flammability characteristics.

Precautions for Safe Handling and Use

Steps If Matl Released/Spill:	If a spill can cause a concentration in excess of 1,000 ppm, turn off valve and ignition sources. Evacuate area. Wear protective equipment. Ventilate area especially low or enclosed places where heavy vapors might collect. Wear SCBA.
Neutralizing Agent:	Not relevant

Waste Disposal Method: Reclaim by distillation, incinerate or remove to a permitted waste facility. Comply with local, state and federal regulations. This material may be a RCRA Hazardous waste upon disposal due to ignitibility characteristic. Reportable quantity is 100 lbs.

Precautions-Handling/Storing: Store in cool, ventilated, dry area away from flames and incompatible materials. Avoid temperatures above 125°F (52°C).

Other Precautions: Avoid breathing vapors. Avoid eye or skin contact. Wash with soap and water before eating or drinking. Use with adequate ventilation. Keep out of reach of children.

Control Measures

Respiratory Protection: Not normally required, Wear NIOSH-approved self-contained breathing apparatus operated in positive pressure mode or supplied-air respirator if a large release occurs.

Ventilation: Mechanical (general and/or local exhaust, explosion-proof) ventilation to maintain exposure below TLV(S).

Protective Gloves: Lined butyl when handling liquid

Eye Protection: Chemical splash goggles when handling liquid.

Other Protective Equipment: Eyebath, safety shower, protective clothing

Work Hygienic Practices: Observe good personal hygiene practices and recommended procedures.

Regulatory Information

TSCA Inventory Status : Reported / Included.

TITLE III Hazard Classifications Sections 311, 312

Acute : Yes
Chronic : No
Fire : Yes
Reactivity : No
Pressure : Yes

LISTS:

SARA Extremely Hazardous Substances : No
SARA Toxic Chemicals : No
CERCLA : (See Disposal Considerations)

HFC-152a is a flammable gas as defined by OSHA in 29CFR 1910.1200 (c). Use of this product may require compliance with 29CFR 1910.119, Process Safety Management of Highly Hazardous Chemical.

Transportation Data

UN Class: 2.1
Label: Flammable gas
Prop. Shipping Name: 1,1- Difluoroethane
ID Number: UN1030
Additional Trans Data: Proper shipping name, UN ID NUMBER, hazard class, Per MSDS.